

ABSTRACT

Methods of preparing fresh animal protein products of consistent composition and specification useful as ingredients in extrusion systems are provided, wherein one or more aqueous streams (10, 54, 56) of fresh, uncooked animal protein and fat are initially blended (12, 5 60) and emulsified (14, 62). The emulsified and blended streams (10, 54, 56) include solid particles having a maximum dimension of up to about 2mm. These materials are analyzed preferably using near infrared and microwave analyzers (16, 64, 68) and an output stream (18, 70) is created. The analyzers (16, 64, 68) create product signatures for the analyzed materials which is used to adjust the specification of the materials via recirculation (42), addition of fresh 10 animal protein (10) or other ingredients (30) in a batch system; or by appropriate mixing of individual streams (54, 56) in a continuous mixer (66).